

### REMARKS/ARGUMENTS:

Claim 95 has been canceled.

Claims 11, 12 – 14, 68, 70, 72, 74 – 76, 78, 80 – 83 have been amended to correct formal issues of misspellings, lack of antecedent basis, and typographical errors, as pointed out by the Office in the most recent Action.

Support for the clarification that the “STS system” is a sulfonylurea herbicide is provided by the two print-outs that are attached of web sites that explain that herbicide system.

Claims 2, 8 — 17, 20 — 29 and 64 — 85 and 99 are in the case.

No new matter has been added.

Rejection of claim 95 under 35 USC §103(a) as obvious over the combination of U. S. Patent No. 5,288,747 to Aebi *et al.*, and U.S. Patent No. 6,617,330 to Walter.

Claim 95 has been canceled. Accordingly, it is believed that the present ground of rejection is moot.

Notification of the allowability of claims 2, 8 – 10, 20 – 29, 64 – 67, 71, 73, 79, 80, 84, 85 and 99.

The notification of the allowability of claims 2, 8 – 10, 20 – 29, 64 – 67, 71, 73, 79, 80, 84, 85 and 99 is noted with appreciation.

Allowability of claims 15 – 17 and 77 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

It is believed that the amendments to claims 11 and 70, from which the presently rejected claims ultimately depend, resolves the issues regarding the allowability of each of the claims, and their allowance is respectfully requested.

#### Request for reconsideration:

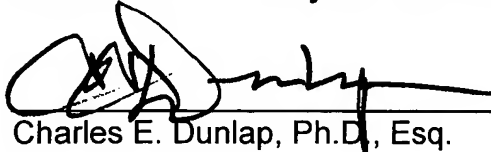
It is respectfully requested that the claims be reconsidered in view of the amendments described above and be found to be allowable. If one or more of the claims are found to not be allowable, a telephone call to the undersigned would be

appreciated in order to resolve any remaining issues.

Respectfully submitted,  
**Nelson Mullins Riley & Scarborough LLP**

July 1, 2005

Dated: \_\_\_\_\_

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## **Virginia Cooperative Extension**

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### **New Management Strategies for Herbicide-Tolerant Soybeans**

The remainder of the 1990s promises to be a dynamic period in soybean weed control, primarily due to the commercialization of herbicide-tolerant varieties. The new varieties will increase the weed management tools available to growers, and learning when, how, and where to use this powerful tool will provide the soybean grower with a totally new way to control weeds in soybeans.

Several herbicide manufacturers will market herbicide-tolerant beans such as STS (sulfonyleurea-tolerant) soybeans by DuPont, Roundup Ready soybeans by Monsanto, and Liberty-tolerant (glufosinate) soybeans by AgrEvo. Several benefits of this technology are readily apparent. These include less soybean injury than often experienced with other postemergence herbicides; a high level of activity on numerous species of grass, broadleaf weeds and sedges; expansion of the postemergence time period of application; herbicide-resistant weed management; increased crop rotation flexibility; and new weed control strategies for conservation tillage systems.

In addition, the soil behavior characteristics and low non-target organism toxicity of chemicals such as Roundup appeals to most critics of expanded herbicide use. There is also the possibility of the Roundup Ready system reducing weed control costs for the farmer. For example, because of the potential to carry over and injure succeeding crops, the use of some soybean herbicides is not an option to all growers. In this case, effective weed control with the Roundup Ready system in combination with the ability to rotate to any crop would be a benefit.

Traditionally, soybean weed control programs revolve around selecting the lowest cost herbicide and cultural program that will control the problem weeds and not adversely affect production. The typical program has been to use a soil-applied herbicide to control weeds not controlled by the soil-applied herbicide. In most conservation tillage systems, either Roundup or Gramoxone Extra has been applied alone or combined with the soil-applied herbicide to control weeds that have emerged at planting. While this approach is successful, the increased herbicide costs associated with some conservation tillage systems has prevented their adoption by growers, particularly when soybean prices are low.

Research conducted over several years has shown that the Roundup Ready system is a viable alternative to current weed control systems. With Roundup Ready soybeans, it may be possible to delay the preplant burndown herbicide application until after soybeans have emerged. In this case, there is the potential to reduce herbicide costs. However, the success of this approach will depend upon the weed and cover crop species, weed density and environmental conditions present at the time of application. In addition, Roundup has been shown to be highly effective in controlling sicklepod and pigweed. These two particular weeds have been difficult to control under conditions frequently found in soybean fields.

As for other herbicides, the development of the STS (sulfonyleurea-tolerant soybeans) system has improved the tolerance of soybeans to herbicides such as thifensulfuron (Pinnacle) and chlorimuron (Classic). DuPont will market Synchrony, a mixture of thifensulfuron and chlorimuron, for use on soybean varieties designated as STS varieties. The addition of thifensulfuron improves the postemergence control of pigweed species, common lambsquarters and wild poinsettia over that typically obtained with chlorimuron. AgrEvo is proceeding with the development of soybeans that are

tolerant to glufosinate (Liberty). Glufosinate is classified as a non-selective, contact, postemergence herbicide. Its mode of action is different from Roundup, and it has no soil activity. Thus, there will be no crop rotation restrictions.

The advent of herbicide-tolerant soybeans has introduced an era of new approaches to weed management. Growers will have the option of switching to a total postemergence weed control system, see less temporary injury to soybeans and with either the Roundup Ready or Liberty system have unlimited crop rotation possibilities. The ultimate success of herbicide-tolerant soybeans will depend on the desirable agronomic traits and yield potential associated with these cultivars. There is every reason to believe that herbicide-tolerant soybeans will have these attributes.

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